47 Characterization factors development at a land management practice level: learnings from a forestry case study for land use impact assessment on climate change C. Cornillier, FCBA, A. Benoist, CIRAD / UPR BioWooEB ELSA research group. The UNEP-SETAC guideline on global land use impact assessment in LCA, published in 2013 by Koellner et al., provides key recommendations to properly develop characterization models related to land use interventions, i.e. occupation and transformation. However, available characterization factors for such models are mainly site-generic and fail to consider different land management practices. This study thus aimed at assessing the feasibility of the development of characterization factors at a land management practice level, based on the UNEP-SETAC guideline. Two land use impact assessment models for climate change related to carbon sequestration potential were considered: the method published in 2010 by Müller-Wenk & Brandão as well as a new method recently developed by Benoist & Cornillier (publication under writing). These methods were applied to different forestry land uses. Several cases were performed in an attributional approach, considering three species (Douglas-fir, eucalyptus, chestnut) according to various silvicultural systems (coppice, short rotation coppice, high stand) with or without evolution of forestry practices (shortening of the revolution, intensification of harvest…). In a consequential approach, one case was studied: a harvesting intensification of eucalyptus short rotation coppice. Based on these applications, this work identified four main difficulties when applying the current land use framework: \n- Matching real dynamics to the framework modelling;\n- Allocating quality variations to land transformations and/or successive land occupations;\n- Developing characterisation factors for the consequential modelling approach; and\n- Dealing with dynamic equilibria of land use properties.\nFinally the UNEP-SETAC guideline remains mainly theoretical and deals with generic issues, which can be insufficient when building characterization factors at a land management practice level based on field data.